AI1120 Introductory Economics and Quantitative Methods 1.5 credits

Introductory Economics and Quantitative Methods

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for AI1120 valid from Autumn 2008

Grading scale

P, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After this course students will be able to:

- Perform calculations in basic financial mathematics and model these in EXCEL
- Perform computations involving statistical inference and regression analysis
- Perform regressions in EXCEL
- Explain and analyse basic microeconomic issues involving • Demand and supply • Production and costs

Market structure

Course contents

1. Financial Mathematics

- Exponents, exponential functions, and logarithms
- Linear and quadratic equations
- Arithmetic and geometric progressions

    B. Introduction to Excel   C. Statistics

- Descriptive statistics – frequency distribution, measures of central tendency and dispersion
- Probability concepts • Probability distributions, expected value, variance, and covariance • The normal distribution • Confidence intervals and hypothesis testing
- Regression analysis • Statistical inference using regression analysis • Forecasting

    D. Economics

- Demand, Supply, Equilibrium prices and Elasticity
- Short-run and long run production theory
- Short and long-run costs

Perfect Competition & Monopoly

Course literature

Extracts from:Brown, G.R., & Matysiak, G.A. (2000). **Real Estate Investment – A Capital Market Approach**. Financial Times/Prentice-Hall.McEachern, W.A. (2003). Economics, **a contemporary introduction.** The Wall Street Journal edition. Thomson/Southwestern.Other resources will be provided in class.

Examination

- NÄR1 - Attendance, 1.5 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.